REMARKS

Claims 1-18 are currently pending in the subject application. Claims 16-18 are withdrawn from consideration. Claims 1 and 7 have been amended to recite that the selectable marker gene comprises a nucleotide sequence that hybridizes to a complement of SEQ ID NO: 2 or plant optimized version thereof under high stringency conditions. Support for this amendment is found through out the specification, and particularly at pages 13-17 and 19, which describe the hybridization parameters for high stringency. Further, the specification at pages 12 and 13 teaches that the nucleotide sequences referenced for the novel polynucleotide constructs and selection methods may be altered to have preferred codon usage for cell type targeted for transformation. The specification teaches the methods for determining which codons should be changed and methods for doing so. Claim 2 was cancelled as being incongruent with claim 1; the promoter used and placement of the promoter used is dependent on the cell type into which the polynucleotide is transformed, as taught in the specification. Claims 14 and 15 are cancelled without prejudice. Applicants reserve the right to pursue any subject matter affected by the amendments/cancellations above in co-pending or later-filed continuation/divisional applications. New claims 19-24 are supported throughout the specification. Accordingly, in light of the amendments above, claims 1, 3-13, and 19-24 will be before the Examiner for review.

Claims 1, 2 and 13-15 are rejected under 35 USC § 101. Applicants assert that the amendments to claims 1 and 13 obviate this rejection. Reconsideration is requested.

Claims 2-12 are rejected under 35 USC § 112, second paragraph. Applicants assert that the amendments to claims 3 and 7 obviate this rejection. Reconsideration is requested.

Claims 1-13 are rejected under 35 USC § 112, first paragraph, for failing to comply with the written description requirement. Applicants traverse in part, and otherwise believe that the amendments set forth above obviate this rejection. Claims 1, 7 and 13 have been amended to recite that the nucleotide sequence may be SEQ ID NO: 2 or sequences that hybridize under high stringency conditions to the complements thereof or plant optimized versions thereof. These amendments address the Examiner's concerns at page 6 of the office action that the claims "broadly encompass hybridization under any condition." According to the Interim Written Description Guidelines from USPTO (Example 9), claims 1, 7, and 13 meet the written description requirement. As to the plant optimization, this is taught at pages 12-13 of specification, and is a well-known process in the art used to increase yield of genes derived from one species and transformed and expressed in another species. Applicants were clearly in possession of plant optimized versions of SEQ ID NO: 2 at the time of filing the subject application. Similarly, these remarks apply to new claims 20 and 21 which contain similar language but refer to SEQ ID NO: 1.

Claims 4 and 7 have been amended to remove the term "derivative". Applicants rely on the definitions of arabitol, ribitol and manitol provided in the specification.

In view of the foregoing amendments and remarks, Applicants believe that all written description rejections under 35 USC § 112, first paragraph. Reconsideration and withdrawal of this rejection is requested.

Next, claims 1-13 are rejected under 35 USC § 112, first paragraph as failing to comply with the enablement requirement. Applicants assert that the amendments to claims 1, 7 and 13 and the remarks provided above in response to the written description requirement, obviate this concern. Given the parameters of high stringency conditions as taught in the specification, one

skilled in the art would be able to routinely obtain sequences as claimed and transform them into cells. Further, in view of the teachings in the specification, one skilled in the art would be able to test marker gene sequences for their ability to confer a selective advantage to the transformed cell when in the presence of a marker compound.

At pages 9 and 10, the Examiner questions the ability of the transformed selective marker gene to confer a selective advantage over non-transformed cells. Applicants provide herewith a Declaration of Dr. Peter LaFayette which directly addresses this concern. In his declaration, Dr. LaFayette explains that the transformation of a cell with a selective marker gene confers a selective advantage over non-transformed cells when both transformed cells and non-transformed cells are placed in a medium containing a marker compound. In other words, the transformed cells are able to metabolize the marker compound and thrive in the medium, whereas the non-transformed cells do not thrive, have very little growth, and/or die. In addition, Dr. LaFayette provides exhibits showing the successful transformation of plant cells with the gene constructs of the subject invention and showing how the transformed plants cells are able to thrive in a marker compound medium. For example, Dr. LaFayette shows that when tobacco leaf disc are transformed with the claimed constructs, the transformed tobacco grew 18 shoots when grown in arabitol containing medium, versus the control which grew no shoots.

Dr. LaFayette's declaration and the data presented therein demonstrate that the positive selection methods of claim 7 and claim 21, and use of the genetic construct in claim 1 are enabled. As the claims dependent on these claims are construed to contain the limitations of the independent base claims, such dependent claims are enabled also. Reconsideration and withdrawal of this 35 USC § 112, first paragraph, rejection is respectfully requested.

Lastly, claims 1-3, 5, 6, and 10-13 are rejected under 35 USC §102(b) as being anticipated by Bojsen et al. (U.S. Patent No. 5,767,378). The Examiner asserts that the breadth of the claims cause them to read on the disclosure of the Bojsen patent. Applicants assert that the amendments to claims 1 and 13 obviate this rejection. In particular, claims 1 and 13 have been amended to recite selectable marker genes that have the ability to hybridize to SEQ ID NO.: 2 under high stringency conditions. Given the parameters of high stringency conditions, the genes taught by Bojsen involved in mannose metabolism would not hybridize to SEQ ID NO.: 2. Accordingly, the selectable marker genes recited in claims 1 and 13 are distinguished from those disclosed in the Bojsen reference. Applicants request reconsideration and withdrawal of the rejection under 35 USC §§ 102(b) and 103.

Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Timothy H. Van Dyke, Applicants' Attorney at 407-240-0085 so that such issues may be resolved as expeditiously as possible.

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,

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Date

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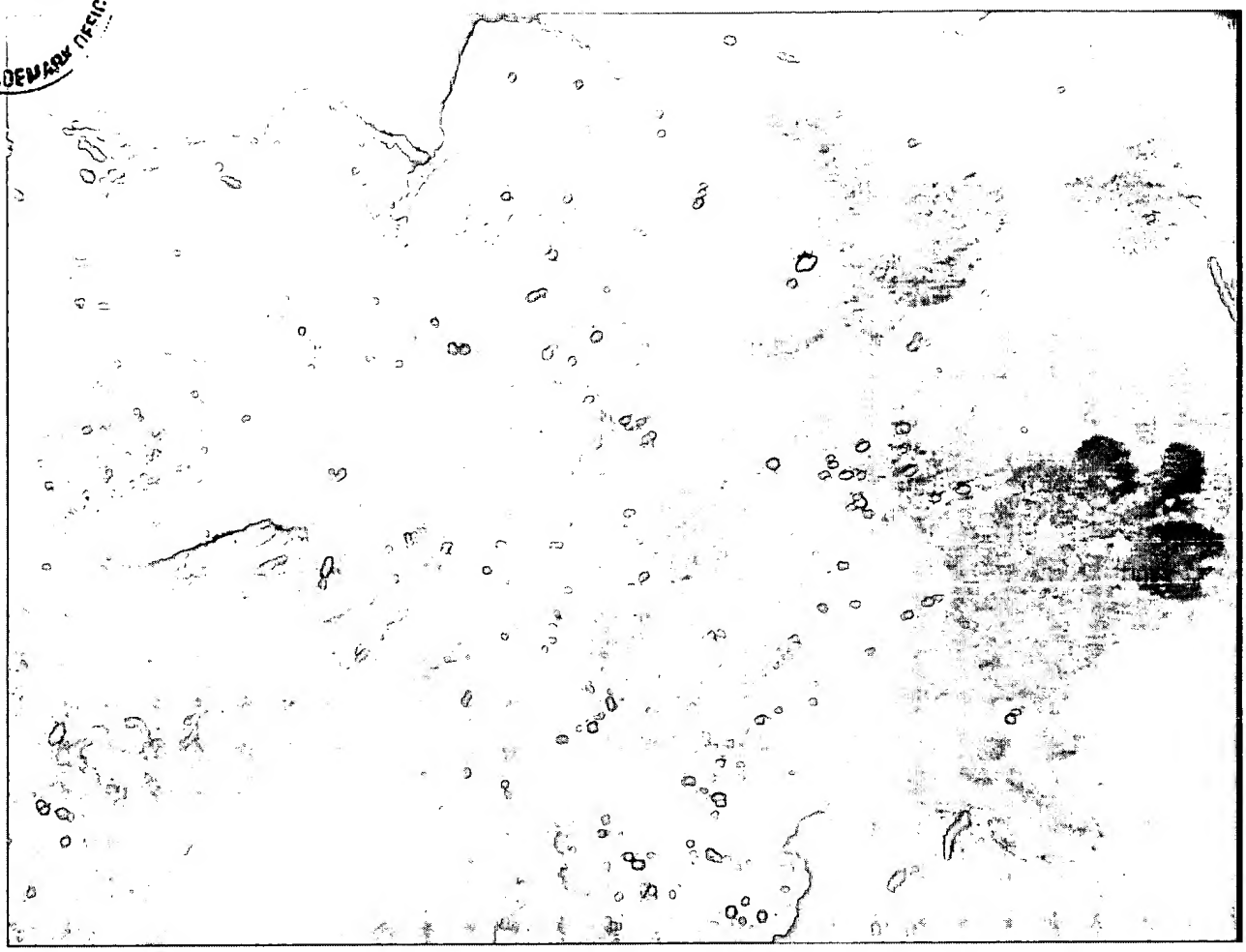

Exhibit A

Exhibit B